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[Continued on next page]

(54) Title: MANAGEMENT OF DEVICE FIRMWARE UPDATE EFFECTS AS SEEN BY A HOST

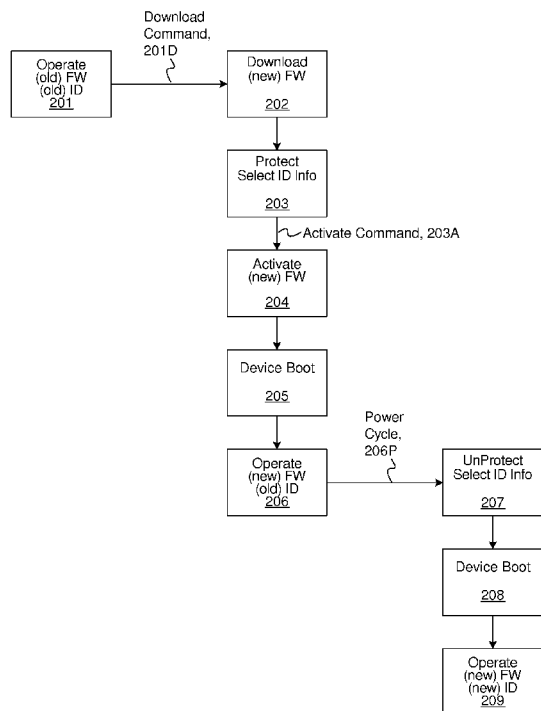


Fig. 2

(57) Abstract: Management of device firmware update effects as seen by a computing host enables continuously running an OS on the host across a device firmware update, e.g., via delaying visibility of at least a portion of effects of the firmware update, such as in a context where without the delay in visibility the OS would encounter an unrecoverable error and crash. For example, a device (e.g. an SSD) is coupled to a computing host running an unmodified version of Windows. Firmware on the device is updated/activated, such as by being booted. Visibility of a portion of information that would otherwise become immediately visible to the OS (upon activation of updated firmware) is delayed until a power cycle of the device. If the portion includes, e.g., a firmware revision identifier, then the delayed visibility enables continuously running the OS across the firmware update/activation without rebooting the OS.



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— *of inventorship (Rule 4.17(iv))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/041088**A. CLASSIFICATION OF SUBJECT MATTER****G06F 13/00(2006.01)i, G06F 9/22(2006.01)i, G06F 9/30(2006.01)i**

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G06F 13/00; G06F 12/16; G06F 9/44; G06F 3/00; G06F 12/14; G06F 9/46

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: firmware, software, update, upgrade, host, memory, identifier, command

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2008-0040713 A1 (SRIHARSHA MYSORE SUBBAKRISHNA et al.) 14 February 2008 See paragraphs [0004], [0041]–[0043], [0058], [0061], [0064], [0065]; claims 1, 16, 18, 20, 27, 28.	1–20
A	US 7865907 B2 (GREG OPHEIM) 04 January 2011 See column 3, lines 10–11, column 4, lines 18–30; claim 1.	1–20
A	US 7065769 B1 (STEPHEN J. TOLOPKA) 20 June 2006 See column 3, lines 4–6; claim 1.	1–20
A	US 2010-0095079 A1 (KANG BYUNG SUK) 15 April 2010 See claims 5, 11.	1–20
A	US 2005-0028172 A1 (HIROTO YOSHIKAWA et al.) 03 February 2005 See paragraphs [0007], [0011]; claim 5.	1–20

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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